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A Pressure Compensation Device for a Two-Part Container

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The invention relates to a pressure compensation device for a two-part container which consists of a rigid outer container and a collapsible inner container. The inner container contains a fluid.

The aim of the invention is to disclose a device which is suitable for the compensation of pressure between the ambient air and the gaseous space between the inner container and the outer container, and which can be produced economically and which is protected from blockages.

The keeping of fluids, possibly containing a medicine, in a flexible inner container disposed inside a rigid outer container prior to use is known. When fluid is removed from the inner container by means of a metering pump, the inner container collapses. If the outer container does not contain an opening, a reduced pressure builds up in the closed intermediate space between the two containers. When a metering pump is used, which can only produce a small intake pressure, removal of fluid becomes difficult as soon as the reduced pressure between the two containers has become approximately equal to the intake pressure. It is then necessary to produce pressure compensation in the intermediate space between the two containers.

DE - 41 39 555 describes a container which consists of a rigid outer container and an easily deformable inner bag. The container is produced in a co-extrusion-blowing process from two thermoplastics synthetic materials which merge together without a join. The outer container has a closed bottom and contains at least one opening for the compensation of pressure between the surroundings and the space between the outer container and the inner bag. The shoulder section of the outer container has at least one unwelded seam between two oppositely disposed wall sections of the outer container which are not welded together. Preferably, two unwelded seams are